1-1.1 Define the following terms:
- a. EMS Systems
- b. Licensure
- c. Certification
- d. Registration
- e. Profession
- f. Professionalism
- g. Health care professional
- h. Ethics
- I. Peer review
- j. Medical direction
- k. Protocols

1-1.2 Describe key historical events that influenced the development of national Emergency Medical Services (EMS) systems.

1-1.5 Describe the attributes of a paramedic as a health care professional.

1-1.7 Explain paramedic licensure/ certification, recertification, and reciprocity requirements in his or her state.

1-1.15 Describe how professionalism applies to the paramedic while on and off duty.

1-1.16 Describe examples of professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.

1-1.17 Provide examples of activities that constitute appropriate professional behavior for a paramedic.

1-1.19 Identify the benefits of paramedics teaching in their community.

1-1.20 Describe what is meant by "citizen involvement in the EMS system."

1-1.22 List the primary and additional responsibilities of paramedics.

1-1.23 Describe the role of the EMS physician in providing medical direction.

1-1.29 Describe the components of continuous quality improvement.

1-1.34 Describe the importance and benefits of research.

1-2.2 Define the components of wellness.

1-2.8 Discuss how periodic risk assessments and knowledge of warning signs contribute to cancer and cardiovascular disease prevention.

1-2.13 Describe the considerations that should be given to:
- a. Using escorts
- b. Adverse environmental conditions
- c. Using lights and siren
- d. Proceeding through intersections
- e. Parking at an emergency scene

1-2.17 Describe the three phases of the stress response.

1-2.19 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.

1-2.20 Describe the common physiological and psychological effects of stress.

1-2.23 Identify and describe the defense mechanisms and management techniques commonly used to deal with stress.

1-2.27 Describe the stages of the grieving process (Kubler-Ross).

1-2.29 Describe the unique challenges for paramedics in dealing with the needs of children and other special populations related to their understanding or experience of death and dying.

1-4.1 Differentiate between legal and ethical responsibilities.

1-4.3 Differentiate between civil and criminal law as it pertains to the paramedic.
1-4.10 Describe the four elements that must be present in order to prove negligence.
1-4.11 Given a scenario in which a patient is injured while a paramedic is providing care, determine whether the four components of negligence are present.
1-4.13 Explain the concept of liability as it might apply to paramedic practice, including physicians providing medical direction and paramedic supervision of other care providers.
1-4.14 Discuss the legal concept of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
1-4.15 Explain the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
1-4.16 Differentiate among expressed, informed, implied, and involuntary consent.
1-4.17 Given a scenario in which a paramedic is presented with a conscious patient in need of care, describe the process used to obtain consent.
1-4.19 Given a scenario, demonstrate appropriate patient management and care techniques in a refusal of care situation.
1-4.20 Describe what constitutes abandonment.
1-4.21 Identify the legal issues involved in the decision not to transport a patient, or to reduce the level of care being provided during transportation.
1-4.23 Differentiate between assault and battery and describe how to avoid each.
1-4.24 Describe the conditions under which the use of force, including restraint, is acceptable.
1-4.25 Explain the purpose of advance directives relative to patient care and how the paramedic should care for a patient who is covered by an advance directive.
1-4.26 Discuss the responsibilities of the paramedic relative to resuscitation efforts for patients who are potential organ donors.
1-4.27 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
1-4.29 Describe the characteristics of a patient care report required to make it an effective legal document.

1-5.4 Analyze the relationship between the law and ethics in EMS.
1-5.6 Identify the issues surrounding the use of advance directives, in making a prehospital resuscitation decision.

1-7.2 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
1-7.3 List the four main sources of drug products.
1-7.4 Describe how drugs are classified.
1-7.7 Differentiate among Schedule I, II, III, IV, and V substances.
1-7.8 List examples of substances in each schedule.
1-7.11 Discuss special consideration in drug treatment with regard to pregnant, pediatric and geriatric patients.
1-7.12 Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications.
1-7.13 Review the specific anatomy and physiology pertinent to pharmacology with additional attention to autonomic pharmacology.
1-7.14 List and describe general properties of drugs.
1-7.16 List and differentiate routes of drug administration.
1-7.17 Differentiate between enteral and parenteral routes of drug administration.
1-7.18 Describe mechanisms of drug action.

1-7.19 List and differentiate the phases of drug activity, including the pharmaceutical, pharmacokinetic, and pharmacodynamic phases.
1-7.20 Describe the process called pharmacokinetics, pharmocodynamics, including theories of drug action, drug-response relationship, factors altering drug responses, predictable drug responses, iatrogenic drug responses, and unpredictable adverse drug responses.
1-7.21 Differentiate among drug interactions.
1-7.22 Discuss considerations for storing and securing medications.

1-9.2 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
1-9.4 Provide examples of open-ended and closed or direct questions.
1-9.10 Differentiate the strategies a paramedic uses when interviewing a patient who is hostile compared to one who is cooperative.
1-9.11 Summarize developmental considerations of various age groups that influence patient interviewing.
1-9.13 Discuss interviewing considerations used by paramedics in cross-cultural communications.

2-1.1 Explain the primary objective of airway maintenance.
2-1.2 Identify commonly neglected prehospital skills related to airway.
2-1.3 Identify the anatomy of the upper and lower airway.
2-1.4 Describe the functions of the upper and lower airway.
2-1.5 Explain the differences between adult and pediatric airway anatomy.
2-1.8 List the concentration of gases that comprise atmospheric air.
2-1.9 Describe the measurement of oxygen in the blood.
2-1.12 List factors that cause decreased oxygen concentrations in the blood.
2-1.13 List the factors that increase and decrease carbon dioxide production in the body.
2-1.14 Define atelectasis.
2-1.15 Define FiO_2.
2-1.16 Define and differentiate between hypoxia and hypoxemia.
2-1.17 Describe the voluntary and involuntary regulation of respiration.
2-1.18 Describe the modified forms of respiration.
2-1.19 Define normal respiratory rates and tidal volumes for the adult, child, and infant.
2-1.20 List the factors that affect respiratory rate and depth.
2-1.22 Define pulsus paradoxes.
2-1.23 Define and explain the implications of partial airway obstruction with good and poor air exchange.
2-1.24 Define complete airway obstruction.
2-1.25 Describe causes of upper airway obstruction.
2-1.26 Describe causes of respiratory distress.
2-1.27 Describe manual airway maneuvers.
2-1.28 Describe the Sellick (cricoid pressure) maneuver.
2-1.30 Explain the purpose for suctioning the upper airway.
2-1.31 Identify types of suction equipment.
2-1.32 Describe the indications for suctioning the upper airway.
2-1.33 Identify types of suction catheters, including hard or rigid catheters and soft catheters.
2-1.34 Identify techniques of suctioning the upper airway.
2-1.36 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique of tracheobronchial suctioning in the intubated patient.
2-1.37 Describe the use of an oral and nasal airway.
2-1.38 Identify special considerations of tracheobronchial suctioning in the intubated patient.

2-1.39 Define gastric distention.
2-1.40 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for inserting a nasogastric tube and orogastric tube.
2-1.42 Describe the indications, contraindications, advantages, disadvantages, complications, and technique for inserting an oropharyngeal and nasopharyngeal airway
2-1.43 Describe the indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient by:
- a. Mouth-to-mouth
- b. Mouth-to-nose
- c. Mouth-to-mask
- d. One person bag-valve-mask
- e. Two person bag-valve-mask
- f. Three person bag-valve-mask
- g. Flow-restricted, oxygen-powered ventilation device

2-1.44 Explain the advantage of the two person method when ventilating with the bag-valve-mask.
2-1.45 Compare the ventilation techniques used for an adult patient to those used for pediatric patients.
2-1.46 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV).
2-1.48 Identify types of oxygen cylinders and pressure regulators (including a high-pressure regulator and a therapy regulator).
2-1.50 Describe the use, advantages and disadvantages of an oxygen humidifier.
2-1.51 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
2-1.52 Define, identify and describe a tracheostomy, stoma, and tracheostomy tube.
2-1.54 Define how to ventilate with a patient with a stoma, including mouth-to-stoma and bag-valve-mask-to-stoma ventilation.
2-1.55 Describe the special considerations in airway management and ventilation for patients with facial injuries.
2-1.56 Describe the special considerations in airway management and ventilation for the pediatric patient.
2-1.57 Differentiate endotracheal intubation from other methods of advanced airway management.
2-1.58 Describe the indications, contraindications, advantages, disadvantages and complications of endotracheal intubation.
2-1.60 Describe the indications, contraindications, advantages, disadvantages, complications, equipment, and technique for direct laryngoscopy.
2-1.61 Describe visual landmarks for direct laryngoscopy.
2-1.62 Describe use of cricoid pressure during intubation.
2-1.64 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for using a dual lumen airway.
2-1.69 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for nasotracheal intubation.
2-1.70 Describe the indications, contraindications, advantages, disadvantages and complications for performing an open crichothyrotomy.
2-1.72 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for transtlaryngeal catheter ventilation (needle cricothyrotomy).

2-1.73 Describe methods of assessment for confirming correct placement of an endotracheal tube.
2-1.75 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
2-1.76 Describe methods of endotracheal intubation in the pediatric patient.

3-1.4 Differentiate between facilitation, reflection, clarification, sympathetic responses, confrontation, and interpretation.
3-1.7 List the components of a comprehensive history of an adult patient.

3-2.1 Define the terms inspection, palpation, percussion, auscultation.
3-2.2 Describe the techniques of inspection, palpation, percussion, and auscultation.
3-2.3 Describe the evaluation of mental status.
3-2.5 Describe the examination of skin, hair and nails.
3-2.6 Differentiate normal and abnormal findings of the assessment of the skin.
3-2.7 Distinguish the importance of abnormal findings of the assessment of the skin.
3-2.8 Describe the examination of the head and neck.
3-2.9 Differentiate normal and abnormal findings of the scalp examination.
3-2.11 Describe the assessment of visual acuity.
3-2.16 Describe the examination of the ears.
3-2.18 Describe the examination of the nose.
3-2.22 Describe the examination of the neck.
3-2.24 Describe the survey of the thorax and respiration.
3-2.25 Describe the examination of the posterior chest.
3-2.27 Differentiate the percussion notes and their characteristics.
3-2.28 Differentiate the characteristics of breath sounds.
3-2.29 Describe the examination of the anterior chest.
3-2.30 Differentiate normal and abnormal assessment findings of the chest examination.
3-2.33 Distinguish normal and abnormal findings of arterial pulse.
3-2.36 Describe the examination of the heart and blood vessels.
3-2.38 Describe the auscultation of the heart.
3-2.39 Differentiate the characteristics of normal and abnormal findings associated with the auscultation of the heart.
3-2.41 Describe the examination of the abdomen.
3-2.42 Differentiate normal and abnormal assessment findings of the abdomen.
3-2.43 Describe auscultation of the abdomen.
3-2.45 Describe the examination of the female genitalia.
3-2.47 Describe the examination of the male genitalia.
3-2.49 Describe the examination of the anus and rectum.
3-2.51 Describe the examination of the peripheral vascular system.
3-2.53 Describe the examination of the musculoskeletal system.
3-2.55 Describe the examination of the nervous system.
3-2.57 Describe the assessment of the cranial nerves.

3-3.1 Recognize hazards/ potential hazards.
3-3.2 Describe common hazards found at the scene of a trauma and a medical patient.
3-3.4 Differentiate safe from unsafe scenes.
3-3.7 Predict patterns of injury based on mechanism of injury.
3-3.9 Organize the management of a scene following size-up.
3-3.11 Summarize the reasons for forming a general impression of the patient.
3-3.12 Discuss methods of assessing mental status.

3-3.17 Analyze a scene to determine if spinal precautions are required.
3-3.24 Discuss the need for assessing the patient for external bleeding.
3-3.32 Apply the techniques of physical examination to the medical patient.
3-3.33 Differentiate between the assessment that is performed for a patient who is unresponsive or has an altered mental status and other medical patients requiring assessment.
3-3.35 State the reasons for performing a rapid trauma assessment.
3-3.37 Apply the techniques of physical examination to the trauma patient.
3-3.38 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated.
3-3.40 Discuss the reason for performing a focused history and physical exam.
3-3.41 Describe when and why a detailed physical examination is necessary.
3-3.43 State the areas of the body that are evaluated during the detailed physical exam.
3-3.46 Differentiate patients requiring a detailed physical exam from those who do not.
3-3.47 Discuss the reasons for repeating the initial assessment as part of the on-going assessment.
3-3.48 Describe the components of the on-going assessment.

3-4.1 Compare the factors influencing medical care in the out-of-hospital environment to other medical settings.
3-4.2 Differentiate between critical life-threatening, potentially life-threatening, and non life-threatening patient presentations.
3-4.3 Evaluate the benefits and shortfalls of protocols, standing orders and patient care algorithms.
3-4.4 Define the components, stages and sequences of the critical thinking process for paramedics.
3-4.5 Apply the fundamental elements of critical thinking for paramedics.
3-4.6 Describe the effects of the “fight or flight” response and the positive and negative effects on a paramedic’s decision making.
3-4.7 Summarize the “six Rs” of putting it all together: Read the patient, Read the scene, React, Reevaluate, Revise the management plan, Review performance.

3-5.1 Identify the importance of communications when providing EMS.
3-5.2 Identify the role of verbal, written, and electronic communications in the provision of EMS.
3-5.3 Describe the phases of communications necessary to complete a typical EMS event.
3-5.4 Identify the importance of proper terminology when communicating during an EMS event.
3-5.8 Identify the importance of proper written communications during an EMS event.
3-5.11 Recognize the legal status of written communications related to an EMS event.
3-5.12 State the importance of data collection during an EMS event.
3-5.14 Recognize the legal status of patient medical information exchanged electronically.
3-5.17 Identify the components of the local dispatch communications system and describe their function and use.
3-5.18 Describe the functions and responsibilities of the Federal Communications Commission.
3-5.19 Describe how an EMS dispatcher functions as an integral part of the EMS team.
3-5.20 List appropriate information to be gathered by the Emergency Medical Dispatcher.
3-5.21 Identify the role of Emergency Medical Dispatch in a typical EMS event.
3-5.22 Identify the importance of pre-arrival instructions in a typical EMS event.
3-5.23 Describe the purpose of verbal communication of patient information to the hospital.

3-5.24 Describe information that should be included in patient assessment information verbally reported to medical direction.

3-6.1 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
3-6.2 Identify and use medical terminology correctly.
3-6.4 Record all pertinent administrative information.
3-6.5 Explain the role of documentation in agency reimbursement.
3-6.6 Analyze the documentation for accuracy and completeness, including spelling.
3-6.7 Identify and eliminate extraneous or nonprofessional information.
3-6.12 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
3-6.13 Describe the special considerations concerning patient refusal of transport.
3-6.15 Explain how to properly record direct patient or bystander comments.
3-6.16 Describe the special considerations concerning mass casualty incident documentation.
3-6.19 Note and record “pertinent negative” clinical findings.

4-1.1 List and describe the components of a comprehensive trauma system.
4-1.5 Define energy and force as they relate to trauma.
4-1.6 Define laws of motion and energy and understand the role that increased speed has on injuries.
4-1.7 Describe each type of impact and its effect on unrestrained victims (e.g., “down and under,” “up and over,” compression, deceleration).
4-1.10 Describe the kinematics of penetrating injuries.

4-2.1 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for shock and hemorrhage.
4-2.2 Discuss the anatomy and physiology of the cardiovascular system.
4-2.3 Predict shock and hemorrhage based on mechanism of injury.
4-2.4 Discuss the various types and degrees of shock and hemorrhage.
4-2.5 Discuss the pathophysiology of hemorrhage and shock.
4-2.12 Relate internal hemorrhage to the pathophysiology of compensated and decompensated hemorrhagic shock.
4-2.13 Relate internal hemorrhage to the assessment findings of compensated and decompensated hemorrhagic shock.
4-2.14 Discuss the management of internal hemorrhage.
4-2.15 Define shock based on aerobic and anaerobic metabolism.
4-2.17 Describe the body's physiologic response to changes in perfusion.
4-2.18 Describe the effects of decreased perfusion at the capillary level.
4-2.19 Discuss the cellular ischemic phase related to hemorrhagic shock.
4-2.20 Discuss the capillary stagnation phase related to hemorrhagic shock.
4-2.21 Discuss the capillary washout phase related to hemorrhagic shock.
4-2.22 Discuss the assessment findings of hemorrhagic shock.
4-2.24 Relate orthostatic vital sign changes to perfusion status.
4-2.25 Define compensated and decompensated hemorrhagic shock.
4-2.26 Discuss the pathophysiological changes associated with compensated shock.
4-2.28 Identify the need for intervention and transport of the patient with compensated shock.
4-2.32 Identify the need for intervention and transport of the patient with decompensated shock.
4-2.34 Differentiate between compensated and decompensated shock.
4-2.35 Relate external hemorrhage to the pathophysiology of compensated and decompensated hemorrhagic shock.

4-2.39 Discuss the physiologic changes associated with the pneumatic anti-shock garment (PASG).
4-2.40 Discuss the indications and contraindications for the application and inflation of the PASG.

4-3.2 Describe the layers of the skin, specifically:
- a. Epidermis and dermis (cutaneous)
- b. Superficial fascia (subcutaneous)
- c. Deep fascia

4-3.3 Identify the major functions of the integumentary system.
4-3.6 Discuss the pathophysiology of wound healing, including:
- a. Hemostasis
- b. Inflammation phase
- c. Epithelialization
- d. Neovascularization
- e. Collagen synthesis

4-3.8 Differentiate between the following types of closed soft tissue injuries:
- a. Contusion
- b. Hematoma
- c. Crush injuries

4-3.12 Differentiate between the following types of open soft tissue injuries:
- a. Abrasions
- b. Lacerations
- c. Major arterial lacerations
- d. Avulsions
- e. Impaled objects
- f. Amputations
- g. Incisions
- h. Crush injuries
- i. Blast injuries
- j. Penetrations/ punctures

4-3.14 Predict blast injuries based on mechanism of injury, including:
- a. Primary
- b. Secondary
- c. Tertiary

4-3.16 Discuss the pathophysiology associated with blast injuries.
4-3.22 Define the following conditions:
- a. Crush injury
- b. Crush syndrome
- c. Compartment syndrome

4-3.23 Discuss the mechanisms of injury in a crush injury.
4-3.31 Differentiate between the various management techniques for hemorrhage control of open soft tissue injuries, including:
- a. Direct pressure
- b. Elevation
- c. Pressure dressing
- d. Pressure point
- e. Tourniquet application

4-3.32 Differentiate between the types of injuries requiring the use of an occlusive versus non-occlusive dressing.
4-3.33 Identify the need for rapid assessment, intervention and appropriate transport for the patient with a soft tissue injury.

4-4.1 Describe the anatomy and physiology pertinent to burn injuries.
4-4.3 Describe the pathophysiologic complications and systemic complications of a burn injury.
4-4.4 Identify and describe types of burn injuries, including a thermal burn, an inhalation burn, a chemical burn, an electrical burn, and a radiation exposure.
4-4.10 Discuss considerations which impact management and prognosis of the burn injured patient.
4-4.11 Discuss mechanisms of burn injuries.
4-4.13 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
4-4.14 Describe the epidemiology of a thermal burn injury.
4-4.16 Describe the pathophysiology of a thermal burn injury.
4-4.20 Discuss mechanisms of burn injury and conditions associated with a thermal burn injury.
4-4.21 Describe the management of a thermal burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies.
4-4.22 Describe the epidemiology of an inhalation burn injury.
4-4.25 Differentiate between supraglottic and infraglottic inhalation injuries.
4-4.29 Discuss mechanisms of burn injury and conditions associated with an inhalation burn injury.
4-4.37 Discuss mechanisms of burn injury and conditions associated with a chemical burn injury.

4-5.1 Describe the incidence, morbidity, and mortality of facial injures.
4-5.2 Explain facial anatomy and relate physiology to facial injuries.
4-5.3 Predict facial injuries based on mechanism of injury.
4-5.4 Predict other injuries commonly associated with facial injuries based on mechanism of injury.
4-5.5 Differentiate between the following types of facial injuries, highlighting the defining characteristics of each:
a. Eye
b. Ear
c. Nose
d. Throat
e. Mouth
4-5.7 Differentiate between facial injuries based on the assessment and history.
4-5.8 Formulate a field impression for a patient with a facial injury based on the assessment findings.
4-5.9 Develop a patient management plan for a patient with a facial injury based on the field impression.
4-5.11 Relate assessment findings associated with eye injuries to pathophysiology.
4-5.12 Integrate pathophysiological principles to the assessment of a patient with an eye injury.
4-5.13 Formulate a field impression for a patient with an eye injury based on the assessment findings.
4-5.16 Relate assessment findings associated with ear injuries to pathophysiology.
4-5.17 Integrate pathophysiological principles to the assessment of a patient with an ear injury.
4-5.18 Formulate a field impression for a patient with an ear injury based on the assessment findings.
4-5.19 Develop a patient management plan for a patient with an ear injury based on the field impression.

4-5.21 Relate assessment findings associated with nose injuries to pathophysiology.
4-5.22 Integrate pathophysiological principles to the assessment of a patient with a nose injury.
4-5.23 Formulate a field impression for a patient with a nose injury based on the assessment findings.
4-5.24 Develop a patient management plan for a patient with a nose injury based on the field impression.
4-5.26 Relate assessment findings associated with throat injuries to pathophysiology.
4-5.27 Integrate pathophysiological principles to the assessment of a patient with a throat injury.
4-5.28 Formulate a field impression for a patient with a throat injury based on the assessment findings.
4-5.29 Develop a patient management plan for a patient with a throat injury based on the field impression.
4-5.31 Relate assessment findings associated with mouth injuries to pathophysiology.
4-5.32 Integrate pathophysiological principles to the assessment of a patient with a mouth injury.
4-5.33 Formulate a field impression for a patient with a mouth injury based on the assessment findings.
4-5.34 Develop a patient management plan for a patient with a mouth injury based on the field impression.
4-5.36 Explain anatomy and relate physiology of the CNS to head injuries.
4-5.37 Predict head injuries based on mechanism of injury.
4-5.38 Distinguish between head injury and brain injury.
4-5.39 Explain the pathophysiology of head/ brain injuries.
4-5.40 Explain the concept of increasing intracranial pressure (ICP).
4-5.54 Explain the pathophysiology of cerebral contusion.
4-5.55 Relate assessment findings associated with cerebral contusion to pathophysiology.
4-5.57 Explain the pathophysiology of intracranial hemorrhage, including:
- a. Epidural
- b. Subdural
- c. Intracerebral
- d. Subarachnoid

4-5.60 Describe the various types of helmets and their purposes.

4-6.1 Describe the incidence, morbidity, and mortality of spinal injuries in the trauma patient.
4-6.2 Describe the anatomy and physiology of structures related to spinal injuries.
- a. Cervical
- b. Thoracic
- c. Lumbar
- d. Sacrum
- e. Coccyx
- f. Head
- g. Brain
- h. Spinal cord
- i. Nerve tract(s)
- j. Dermatomes

4-6.13 Describe the pathophysiology of traumatic spinal injury related to:
- a. Spinal shock
- b. Spinal neurogenic shock
- c. Quadriplegia/ paraplegia
- d. Incomplete cord injury/ cord syndromes:
  1. Central cord syndrome
  2. Anterior cord syndrome

3. Brown-Sequard syndrome

4-6.14 Describe the assessment findings associated with traumatic spinal injuries.
4-6.15 Describe the management of traumatic spinal injuries.
4-6.17 Differentiate between traumatic and non-traumatic spinal injuries based on the
4-6.21 Describe the assessment findings associated with non-traumatic spinal injuries.
4-6.22 Describe the management of non-traumatic spinal injuries.
4-6.24 Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history.

4-7.1 Describe the incidence, morbidity, and mortality of thoracic injuries in the trauma patient.
4-7.4 Discuss the types of thoracic injuries.
4-7.5 Discuss the pathophysiology of thoracic injuries.
4-7.7 Discuss the management of thoracic injuries.
4-7.8 Identify the need for rapid intervention and transport of the patient with thoracic injuries.
4-7.9 Discuss the pathophysiology of specific chest wall injuries, including:
a. Rib fracture
b. Flail segment
c. Sternal fracture
4-7.10 Discuss the assessment findings associated with chest wall injuries.
4-7.11 Identify the need for rapid intervention and transport of the patient with chest wall injuries.
4-7.12 Discuss the management of chest wall injuries.

4-8.1 Describe the epidemiology, including the morbidity/mortality and prevention strategies for a patient with abdominal trauma.
4-8.2 Describe the anatomy and physiology of organs and structures related to abdominal injuries.
4-8.3 Predict abdominal injuries based on blunt and penetrating mechanisms of injury.
4-8.5 Explain the pathophysiology of abdominal injuries.
4-8.6 Describe the assessment findings associated with abdominal injuries.
4-8.7 Identify the need for rapid intervention and transport of the patient with abdominal injuries based on assessment findings.
4-8.8 Describe the management of abdominal injuries.
4-8.10 Differentiate between abdominal injuries based on the assessment and history.
4-8.12 Develop a patient management plan for patients with abdominal trauma based on the field impression.
4-8.19 Describe the assessment findings associated with hollow organ injuries.
4-8.20 Describe the treatment plan and management of hollow organ injuries.
4-8.21 Describe the epidemiology, including the morbidity/ mortality and prevention strategies for abdominal vascular injuries.
4-8.24 Describe the treatment plan and management of abdominal vascular injuries.
4-8.36 Formulate a field impression based upon the assessment findings for a patient with abdominal injuries.
4-8.37 Develop a patient management plan for a patient with abdominal injuries, based upon field impression.

4-9.1 Describe the incidence, morbidity, and mortality of musculoskeletal injuries.
4-9.2 Discuss the anatomy and physiology of the musculoskeletal system.
4-9.4 Discuss the types of musculoskeletal injuries:
a. Fracture (open and closed)

b. Dislocation/ fracture
c. Sprain
d. Strain

4-9.5 Discuss the pathophysiology of musculoskeletal injuries.
4-9.7 List the six "P"s of musculoskeletal injury assessment.
4-9.10 Discuss the need for assessment of pulses, motor and sensation before and after splinting.
4-9.12 Discuss the management of musculoskeletal injuries.
4-9.13 Discuss the general guidelines for splinting.
4-9.14 Explain the benefits of cold application for musculoskeletal injury.
4-9.15 Explain the benefits of heat application for musculoskeletal injury.
4-9.16 Describe age associated changes in the bones.

5-1.1 Discuss the epidemiology of pulmonary diseases and conditions.
5-1.2 Identify and describe the function of the structures located in the upper and lower airway.
5-1.3 Discuss the physiology of ventilation and respiration.
5-1.4 Identify common pathological events that affect the pulmonary system.
5-1.5 Discuss abnormal assessment findings associated with pulmonary diseases and conditions.
5-1.7 Review the pharmacological preparations that paramedics use for management of respiratory diseases and conditions.

5-2.2 Discuss prevention strategies that may reduce the morbidity and mortality of cardiovascular disease.
5-2.3 Identify the risk factors most predisposing to coronary artery disease.
5-2.4 Describe the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, and location and function of cardiac valves.
5-2.5 Identify the major structures of the vascular system.
5-2.6 Identify the factors affecting venous return.
5-2.7 Identify and define the components of cardiac output.
5-2.8 Identify phases of the cardiac cycle.
5-2.9 Identify the arterial blood supply to any given area of the myocardium.
5-2.11 Identify the structure and course of all divisions and subdivisions of the cardiac conduction system.
5-2.14 Define the functional properties of cardiac muscle.
5-2.16 List the most important ions involved in myocardial action potential and their primary function in this process.
5-2.19 Identify the structures of the autonomic nervous system (ANS).
5-2.21 Define and give examples of positive and negative inotropism, chronotropism and dromotropism.
5-2.23 Identify and describe the details of inspection, auscultation and palpation specific to the cardiovascular system.
5-2.24 Define pulse deficit, pulsus paradoxus and pulsus alternans.
5-2.26 Identify and define the heart sounds.
5-2.27 Relate heart sounds to hemodynamic events in the cardiac cycle.
5-2.29 Identify and describe the components of the focused history as it relates to the patient with cardiovascular compromise.
5-2.31 Describe how ECG wave forms are produced.
5-2.32 Correlate the electrophysiological and hemodynamic events occurring throughout the entire cardiac cycle with the various ECG wave forms, segments and intervals.

5-2.33 Identify how heart rates, durations, and amplitudes may be determined from ECG recordings.
5-2.35 Given an ECG, identify the arrhythmia.
5-2.37 Differentiate among the primary mechanisms responsible for producing cardiac arrhythmias.
5-2.39 Describe the arrhythmias originating in the sinus node, the AV junction, the atria, and the ventricles.
5-2.40 Describe the arrhythmias originating or sustained in the AV junction.
5-2.41 Describe the abnormalities originating within the bundle branch system.
5-2.44 Describe the conditions of pulseless electrical activity.
5-2.49 Recognize the limitations of the ECG in reflecting evidence of myocardial ischemia and injury.
5-2.52 Identify the major mechanical, pharmacological and electrical therapeutic interventions.
5-2.53 Based on field impressions, identify the need for rapid intervention for the patient in cardiovascular compromise.
5-2.56 Describe the components and the functions of a transcutaneous pacing system.
5-2.57 Explain what each setting and indicator on a transcutaneous pacing system represents and how the settings may be adjusted.
5-2.61 List the possible complications of pacing.
5-2.66 List and describe the assessment parameters to be evaluated in a patient with angina pectoris.
5-2.67 Identify what is meant by the OPQRST of chest pain assessment.
5-2.69 Identify the ECG findings in patients with angina pectoris.
5-2.70 Identify the paramedic responsibilities associated with management of the patient with angina pectoris.
5-2.71 Based on the pathophysiology and clinical evaluation of the patient with chest pain, list the anticipated clinical problems according to their life-threatening potential.
5-2.72 Describe the epidemiology, morbidity and mortality of myocardial infarction.
5-2.73 List the mechanisms by which an MI may be produced by traumatic and non-traumatic events.
5-2.74 Identify the primary hemodynamic changes produced in myocardial infarction.
5-2.76 Identify the anticipated clinical presentation of a patient with a suspected acute myocardial infarction.
5-2.77 Differentiate the characteristics of the pain/ discomfort occurring in angina pectoris and acute myocardial infarction.
5-2.79 Identify the most common complications of an acute myocardial infarction.
5-2.83 Specify the measures that may be taken to prevent or minimize complications in the patient suspected of myocardial infarction.
5-2.86 Define the principle causes and terminology associated with heart failure.
5-2.87 Identify the factors that may precipitate or aggravate heart failure.
5-2.88 Describe the physiological effects of heart failure.
5-2.89 Define the term "acute pulmonary edema" and describe its relationship to left ventricular failure.
5-2.90 Define preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
5-2.91 Differentiate between early and late signs and symptoms of left ventricular failure and those of right ventricular failure.
5-2.93 Explain the clinical significance of edema of the extremities and sacrum.
5-2.95 Describe the most commonly used pharmacological agents in the management of congestive heart failure in terms of therapeutic effect, dosages, routes of administration, side effects and toxic effects.

5-2.96 Define the term "cardiac tamponade".
5-2.97 List the mechanisms by which cardiac tamponade may be produced by traumatic and non-traumatic events.
5-2.158 Develop, execute, and evaluate a treatment plan based on field impression for the patient in need of a pacemaker.

5-3.12 Discuss the pathophysiology of seizures.
5-3.20 Discuss the management/ treatment plan of syncope.
5-3.23 Discuss the management/ treatment plan of headache.
5-3.48 Define stroke and intracranial hemorrhage.
5-3.54 Discuss the pathophysiology of transient ischemic attack.

5-5.15 Recognize the signs and symptoms related to anaphylaxis.
5-5.16 Differentiate among

5-6.13 Describe the questioning technique and specific questions the paramedic should ask when gathering a focused history in a patient with abdominal pain.
5-6.16 Discuss the pathophysiology of upper gastrointestinal bleeding.
5-6.17 Recognize the signs and symptoms related to upper gastrointestinal bleeding.
5-6.18 Describe the management for upper gastrointestinal bleeding.
5-6.57 Recognize the signs and symptoms related to bowel obstruction.
5-6.87 Recognize the signs and symptoms related to acute hepatitis.

5-9.22 Describe the pathology and clinical manifestations and prognosis associated with:
- a. Anemia
- b. Leukemia
- c. Lymphomas
- d. Polycythemia
- e. Disseminated intravascular coagulopathy
- f. Hemophilia
- g. Sickle cell disease
- h. Multiple myeloma

5-10.1 Define "environmental emergency."
5-10.6 List the principal types of environmental illnesses.
5-10.15 List the common predisposing factors associated with heat and cold disorders.
5-10.18 Define heat illness.
5-10.81 Define high altitude cerebral edema (HACE).

5-11.1 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
5-11.4 Identify public health agencies involved in the prevention and management of disease outbreaks.
5-11.5 List and describe the steps of an infectious process.
5-11.7 List and describe the stages of infectious diseases.
5-11.8 List and describe infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
5-11.9 Describe host defense mechanisms against infection.
5-11.12 In specific diseases, identify and discuss the issues of personal isolation.
5-11.13 Describe and discuss the rationale for the various types of PPE.

5-11.15 Describe the assessment of a patient suspected of, or identified as having, an infectious/ communicable disease.
5-11.17 Discuss disinfection of patient care equipment, and areas in which care of the patient occurred.
5-11.18 Discuss the following relative to HIV - causative agent, body systems affected and potential secondary complications, modes of transmission, the seroconversion rate after direct significant exposure, susceptibility and resistance, signs and symptoms, specific patient management and personal protective measures, and immunization.
5-11.19 Discuss Hepatitis A (infectious hepatitis), including the causative agent, body systems affected and potential secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
5-11.20 Discuss Hepatitis B (serum hepatitis), including the causative agent, the organ affected and potential secondary complications, routes of transmission, signs and symptoms, patient management and protective measures, and immunization.

5-12.2 Define behavioral emergency.
5-12.13 List situations in which the EMT-P is expected to transport a patient forcibly and against his will.

5-14.2 Identify the normal events of pregnancy.
5-14.4 Identify the stages of labor and the paramedic's role in each stage.
5-14.6 Identify and describe complications associated with pregnancy and delivery.
5-14.8 State indications of an imminent delivery.
5-14.13 State the steps to assist in the delivery of a newborn.
5-14.21 Describe the procedures for handling maternal complications of labor.
5-14.22 Describe special considerations when meconium is present in amniotic fluid or during delivery.

6-1.2 Define the term newborn.
6-1.3 Define the term neonate.
6-1.4 Identify important antepartum factors that can affect childbirth.
6-1.5 Identify important intrapartum factors that can term the newborn high risk.
6-1.12 Calculate the APGAR score given various newborn situations.
6-1.14 Prepare appropriate ventilation equipment, adjuncts and technique for a newborn.
6-1.15 Determine when chest compressions are appropriate for a newborn.
6-1.16 Discuss appropriate chest compression techniques for a newborn.
6-1.18 Determine when endotracheal intubation is appropriate for a newborn.
6-1.19 Discuss appropriate endotracheal intubation techniques for a newborn.
6-1.24 Determine when blow-by oxygen delivery is appropriate for a newborn.
6-1.27 Determine when an orogastric tube should be inserted during positive-pressure ventilation.
6-1.29 Discuss the initial steps in resuscitation of a newborn.
6-1.40 Discuss the pathophysiology of apnea in the neonate.
6-1.44 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for bradycardia in the neonate.
6-1.46 Discuss the assessment findings associated with bradycardia in the neonate.
6-1.47 Discuss the management/ treatment plan for bradycardia in the neonate.
6-1.48 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for premature infants

6-1.50 Discuss the assessment findings associated with premature infants.
6-1.51 Discuss the management/ treatment plan for premature infants.
6-1.56 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for seizures in the neonate.
6-1.59 Discuss the management/ treatment plan for seizures in the neonate.
6-1.60 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for fever in the neonate.
6-1.64 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for hypothermia in the neonate.
6-1.66 Discuss the assessment findings associated with hypothermia in the neonate.
6-1.68 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for hypoglycemia in the neonate.
6-1.70 Discuss the assessment findings associated with hypoglycemia in the neonate.
6-1.72 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for vomiting in the neonate
6-1.73 Discuss the pathophysiology of vomiting in the neonate.
6-1.74 Discuss the assessment findings associated with vomiting in the neonate.
6-1.75 Discuss the management/ treatment plan for vomiting in the neonate.
6-1.76 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for diarrhea in the neonate.
6-1.77 Discuss the pathophysiology of in diarrhea the neonate.
6-1.81 Discuss the pathophysiology of common birth injuries in the neonate.
6-1.82 Discuss the assessment findings associated with common birth injuries in the neonate.
6-1.83 Discuss the management/ treatment plan for common birth injuries in the neonate.
6-1.85 Discuss the pathophysiology of cardiac arrest in the neonate.
6-1.87 Discuss the management/ treatment plan for cardiac arrest in the neonate.

6-2.3 Identify methods/ mechanisms that prevent injuries to infants and children.
6-2.6 Identify key growth and developmental characteristics of infants and children and their implications.

6-3.8 Discuss the problems with mobility in the elderly and develop strategies to prevent falls.
6-3.9 Discuss the implications of problems with sensation to communication and patient assessment.
6-3.15 Compare the pharmacokinetics of an elderly patient to that of a young adult. 6-3.
6-3.17 Discuss drug distribution, metabolism, and excretion in the elderly patient.
6-3.23 Discuss the assessment of the elderly patient with pulmonary complaints, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism.
6-3.29 Discuss the assessment of the elderly patient with complaints related to the cardiovascular system, including myocardial infarction, heart failure, dysrhythmias, aneurism, and hypertension.
6-3.30 Identify the need for intervention and transportation of the elderly patient with cardiovascular complaints.
6-3.34 Compare and contrast the pathophysiology of nervous system diseases in the elderly with that of a younger adult, including cerebral vascular disease, delirium, dementia, Alzheimer’s disease and Parkinson’s disease.
6-3.48 Discuss the assessment and management of an elderly patient with GI hemorrhage and bowel obstruction.
6-3.54 Describe the epidemiology in the elderly, including the incidence, morbidity/ mortality, risk factors, and prevention strategies, for patients with drug toxicity.

6-3.55 Compare and contrast the pathophysiology of drug toxicity in the elderly with that of a younger adult.
6-3.60 Discuss the assessment findings common in elderly patients with drug and alcohol abuse.
6-3.74 Discuss the normal and abnormal changes of the integumentary system with age.
6-3.75 Describe the epidemiology for pressure ulcers in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies.
6-3.88 Discuss the assessment findings common in elderly patients with traumatic injuries, including orthopedic injuries, burns and head injuries.
6-3.89 Discuss the management/ considerations when treating an elderly patient with traumatic injuries, including orthopedic injuries, burns and head injuries.

6-4.2 Describe the categories of abuse.
6-4.9 Describe the characteristics associated with the profile of the typical abuser of children.
6-4.13 Identify the profile of the "at-risk" child.
6-4.14 Discuss the assessment and management of the abused patient.

6-6.3 Differentiate between the role of EMS provider and the role of the home care provider.
6-6.5 Summarize the types of home health care available in your area and the services provided.
6-6.12 List the stages of the grief process and relate them to an individual in hospice care.
6-6.16 Describe airway maintenance devices typically found in the home care environment.

7-1.4 Explain strategies to prevent labeling and tunnel vision.

8-1.1 Identify current local and state standards which influence ambulance design, equipment requirements and staffing of ambulances.
8-1.2 Discuss the importance of completing an ambulance equipment/ supply checklist.
8-1.3 Discuss the factors to be considered when determining ambulance stationing within a community.
8-1.4 Describe the advantages and disadvantages of air medical transport.
8-1.5 Identify the conditions/ situations in which air medical transport should be considered.

8-2.1 Explain the need for the incident management system (IMS)/ incident command system (ICS) in managing emergency medical services incidents.
8-2.6 Define the following types of incidents and how they affect medical management:
- a. Open or uncontained incident
- b. Closed or contained incident

8-2.7 Describe the functional components of the incident management system in terms of the following:
- a. Command
- b. Finance
- c. Logistics
- d. Operations
- e. Planning

8-2.9 Describe the role of command.
8-2.18 Describe the START (simple triage and rapid treatment) method of initial triage.
8-2.20 Given color coded tags and numerical priorities, assign the following terms to each:
- a. Immediate
- b. Delayed
- c. Hold

d. Deceased

8-2.22 Describe when primary and secondary triage techniques should be implemented.

8-2.23 Describe the need for and techniques used in tracking patients during multiple casualty incidents.

8-2.24 Describe techniques used to allocate patients to hospitals and track them.

8-2.25 Describe modifications of telecommunications procedures during multiple casualty incidents.

8-2.26 List and describe the essential equipment to provide logistical support to MCI operations to include:

a. Airway, respiratory and hemorrhage control
b. Burn management
c. Patient packaging/ immobilization

8-2.28 Describe the role of critical incident stress management sessions in MCIs.